Variations in Stool handling and Culturing Practices among Clinical Microbiology Laboratory within the Foodborne Diseases Active Surveillance network (FoodNet): Do We Need Practice Guidelines?

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Although stool cultures are among the most common diagnostic procedures performed by clinical laboratories, and certain stool-handling and stool-culturing recommendations have been formulated (e.g., culturing at least all bloody stools for *E. coli* O157), general practice guidelines have not been developed for stool handling and culturing. Furthermore, data on practices of all clinical laboratories within a geographic area are limited. In 1997, we surveyed the 264 identified laboratories which processed stool samples for bacterial pathogens from a population of 14.3 million persons in the FoodNet sites (CA, CT, GA, MN, and OR) in 1996. Hospital-based laboratories accounted for 75% of the laboratories surveyed, with large and small independent laboratories making up the majority of the remainder. The 264 laboratories processed 240,244 stools (1,682/100,000 population) from residents of FoodNet sites for bacterial pathogens in 1996. *Salmonella* and Shigella were routinely tested for in 100% of laboratories, and was tested for in over 97% of all stools; *Campylobacter* was routinely tested for in 95% of laboratories and was tested for in 97% of stools. Despite published recommendations, only 85% of laboratories tested at least all bloody stools for *E. coli* O157; 60% of laboratories routinely tested all stools. Fifty percent of all stools were tested for *E. coli* O157. Culturing practices for *Vibrio* and *Yersinia* were highly variable by site, ranging from less than 9% of stools tested in OR to 37% of stools tested in CA for *Vibrio*, and 15% of stools tested in OR to 37% of stools tested in CA for *Yersinia*. Among laboratories testing for *Vibrio*, 31% used thiosulfate-citrate-bile salts-sucrose (TCBS) agar, ranging from 9% in MN to 67% in CA. Among laboratories testing for *Yersinia*, 43% used cefsulodin-Irgasan-novobiocin (CIN), ranging from 26% in GA to 67% in CT. Although some differences in methods are based on regional recommendations, the substantial variation in stool processing and culturing methods suggests the need for standard approaches and laboratory practice guidelines. CDC is currently working with the Infectious Diseases Society of America to develop stool-culturing guidelines for clinicians. Understanding current laboratory practices and collaborating with ASM will be critical to the success of such guidelines.

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